

# Electr. Dual Pressure Switch

Type UDS 7

Electronic pressure switch for pressure control with internal or flush stainless steel diaphragm, digital display, 2 solid state contacts or solid state plus 1 analog output, linearity error 0.5 % f. s.

## Features

Alphanumeric 4-digit dot-matrix display, microprocessor controlled, self monitoring with error display, scalable analog output. All parameters are configured by keypad, adjustable keypad lock, various access levels, rugged stainless steel construction, optional: rotatable display

## Measuring ranges

0...1 bar 0...10 bar, absolute pressure  
-1...0 bar; 0...0.2 bar to 0...600 bar; relative pressure

## Applications

Hydraulic and pneumatic systems, process/chemical technology, test bed and apparatus construction, automation

## Technical Data

<b>Sensor element:</b>	Piezoresistive silicon measuring cell							
<b>Materials:</b>	Wetted parts: Stainless steel, material no. 1.4301 Electronics housing: Stainless steel, material no. 1.4571 Seals: FKM							
<b>Operating elements:</b>	3 easy-response pushbuttons							
<b>System of protection:</b>	IP67 with PG/IP65 with plug							
<b>Protection class:</b>	III							
<b>Process connection:</b>	G 1/4 M; G 1/2, flush diaphragm for viscous media							
<b>Dimensions:</b>	32 mm x 120 mm (without plug connector)							
<b>Weight:</b>	approx. 350 g							
<b>Measuring ranges [bar]:</b>	0.2	0.4	0.6	1	2	5	10	50
<b>Proof pressure [bar]:</b>	2.5	2.5	2.5	3	4	7	15	75
<b>Measuring ranges [bar]:</b>	100	200	400	600	-	1		
<b>Proof pressure [bar]:</b>	150	300	600	800		2.5		
<b>Linearity error:</b>	$\pm 0.5\%$ f. s. at 25 °C special calibration Option: $\pm 0.25\%$ v. f. s.							
<b>A/D converter:</b>	Resolution: 12 bit (4096 steps per measuring span) Scanning rate: 100/s							
<b>Electrical connection:</b>	Plug M12x1, 5-pin							
<b>Temperature influence:</b>	$\pm 0.2\%$ f. s./10K							
<b>Compensation range:</b>	-10 °C... +70 °C							
<b>Repeatability:</b>	$\pm 0.1\%$ f. s.							



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<b>Temperature range:</b>	<b>Medium:</b> -25 °C...+100 °C <b>Electronics:</b> -10 °C...+70 °C <b>Storage:</b> -30 °C...+80 °C
<b>Power supply:</b>	18...32 V DC, reversed polarity protected (SELV, PELV)
<b>Digital display:</b>	4-digit dot-matrix display, digit height 5 mm, green Display range: -999...+999 Display rate: 5/s Delay: 0.0 s ... 9.9 s adjustable Brightness: 20...100 % adjustable Error display: LED red and alphanumeric display
<b>Power consumption:</b>	approx. 40 mA at $U_b = 24$ V DC (without load)
<b>Analog output:</b>	4...20 mA Current output: max. $RI = (U_b - 12\text{ V})/20\text{ mA}$ Load: $RI = 600\text{ Ohm}$ at $U_b = 24$ V DC Load influence: 0.3 %/100 Ohm Voltage output: 0...10 V DC Rating: max. 10 mA, short-circuit proof Adjustment range: 25 %...100 % f. s.
<b>Transistor switching outputs PNP:</b>	Switching function: Normally open / normally closed, standard / window mode and diagnosis function adjustable Adjustment range: 0 %...125 % f. s. Switching frequency: max. 100 Hz Delay:Display: max. 500 mA, short-circuit proof 0.0 s ... 9.9 s adjustable LED green
<b>Accessories:</b>	Adapter for pressure switch adjustment, damping screw, plug connector
<b>Approval:</b>	GL, cULus: file no. E42816

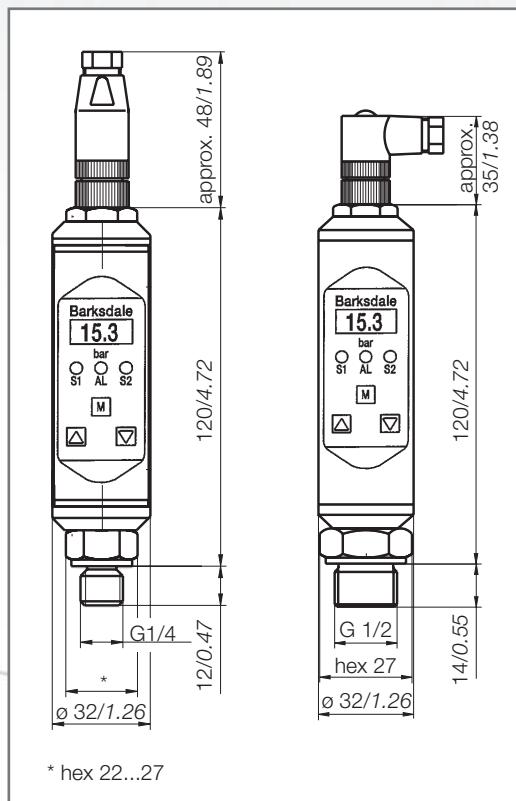
Specifications are subject to changes without notice.

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### Dimensions (in mm / inch)

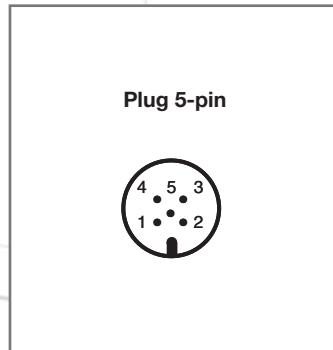
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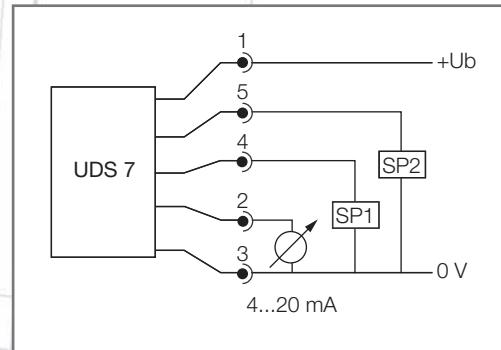
### Connection chart Plug 1 (standard)

Plug M 12 x 1, 5-pin	Model with 2 switching outputs	Model with 2 switching outputs and 1 analog output
Pin 1	+Ub 18...32 V DC	+Ub 18...32 V DC
Pin 2	SP2 0.5 A max.	analog 4...20 mA/ 0...10 V DC
Pin 3	0 V	0 V
Pin 4	SP1 0.5 A max.	SP1 0.5 A max.
Pin 5	---	SP2 0.5 A max.

### Plug



### Connection diagram



### Order Numbers

Pressure ranges	Process connection: G1/4 M		Process connection: G1/2, M, quasi flush	
	4...20 mA	0...10 V DC	4...20 mA	0...10 V DC
0... 1 bar abs.	0427-488	0427-729	---	---
0... 5 bar abs.	0427-489	0427-730	---	---
0... 10 bar abs.	0427-490	0427-731	---	---
0... 10 bar relative	0427-491	0427-735	0427-509	0427-736
0... 50 bar relative	0427-492	0427-737	0427-510	0427-738
0... 100 bar relative	0427-493	0427-739	0427-511	0427-740
0... 200 bar relative	0427-494	0427-741	0427-512	0427-742
0... 400 bar relative	0427-495	0427-743	0427-513	0427-744
0... 600 bar relative	0427-496	0427-745	0427-514	0427-746

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Further measuring ranges on request

### Accessories

Order Number	Description
0499-016	Adapter G1/4 IG - G1/4 male thread for optimum alignment of pressure switch
906-0052	Adapter G1/4 IG - G1/2 male thread manometer connection
0499-002	Wall mounting brackets, stainless steel
901-0677	Damping screw with 0.2 mm restriction against quick pressure changes and high pulsation rate